Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

In the Matter of	)	
	)	
A Petition for Rule Making Submitted by	)	
	)	**RM-9267**
The Land Mobile Communications Council	)	
	)	

TO: The Commission

Comments on the above Petition for Rule Making

Submitted by

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May 29, 1998

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Executive Summary

The request by The Land Mobile Communications Council (LMCC) is clearly contrary to the sense of Congress expressed in the 1993 Omnibus Budget Act. Further, the sense of the act does not mandate reassigning any shared military or other frequencies in which the Amateur Radio Service (ARS) has either primary or secondary status.

The instant petition by the LMCC is clearly an attempt to do an "end Run" contrary to what Congress intended regarding frequencies that may indeed be surplus to the needs of the government and legitimate users serving in the public necessity and interest such as the ARS. Any surplus frequencies can be auctioned, generating substantial revenues for the Federal Treasury.

Background

The Amateur Radio Service does not have any surplus frequencies. At present in the United States, the Amateur Radio Service is secondary to military radiolocation (radar) in the 420-450 MHz band. Originally a primary allocation, secondary status came about during the 1950s when Cold War concerns made national security a high priority. Limited non-government, non-amateur use of the band is permitted -- but amateurs have priority over such use. Sharing with necessary military needs has proven feasible

LMCC clearly misinterprets the significance of amateur secondary status and states that "Amateur applications in the 420-430/440-450 MHz should remain secondary to PMRS". LMCC also suggests the possibility that, "recognizing that amateur radio service will see a net constriction by the recommended reallocation of 420-430/440-450 MHz," 1390-1395/1427-1432 MHz might be allocated to the amateur service to offset this constriction.

"Constriction" is, of course, a bit of an understatement. LMCC has offered no ideas as to how amateurs could continue to share the bands with activities that they propose as primary uses.

Present Amateur Usage

The ARRL Repeater Directory provides easily obtained documented use of the 420 to 450 MHz amateur band and sub band usage. However, the self regulating discipline and experimental activity of the ARS is not reflected in that or any other compilation of published data. An essential use of this band is repeater remote receiver link frequencies which are coordinated by volunteer groups by consensus but not published. An important use of these frequencies is in providing the control frequency, link backbone frequencies and remote receiver frequencies to support repeater systems in the 144 to 148 MHz and 222 to 225 MHz bands.

These applications operate at the minimum power required for dependable performance and typically employ directional antennas. Spectrum analysis viewing or listening to off the air activity can not provide a true basis for analysis of ARS usage.

ARS uses are consistent with the public interest, particularly in providing emergency communications. Occasionally, amateur to amateur interference does occur in linking, control and other unpublished applications. These problems are quickly resolved by volunteer coordinators.

The primary occupant of the 420-450 MHz band is the military. If any change in this status should occur, the primary user should be redesignated again to be the ARS.

Appropriate Vs Inappropriate Land Mobile Wireless Applications

Industrial applications of wireless technology can be highly useful if appropriate technology is utilized. A perceived need for instant communications in manufacturing operations is often traceable to poor management planning and workplace organization.[1]

Avoiding Occupational Injury and Fatalities

The instant LMCC petition claims that repeated fatal accidents have occurred due to a lack of available wireless voice communication frequencies. The longshoring accidents are cited in the petition as having occurred in California. It was claimed that the crane operator dropped a load solely on hearing the words "drop it" over a shared frequency.[2]

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[1] D. Smith, Video, ***Quick Die Change***, Society of Manufacturing Engineers, Dearborn, Michigan, © 1992. Includes two and one half hours of video training, 278 page soft-bound workbook, and 582 page soft-bound facilitator's guide divided into 26 training sessions. Video examples of two-way industrial are presented. The appropriate recourse to common carrier providers and/or FCC approved non user licensed low power devices as a solution to meeting communications needs is discussed in detail. The role of data terminals and simple visual indicators as an appropriate industrial management tool that requires no wireless spectrum is presented in detail. Also, the danger to personnel due to malfunction of electronic safety devices in the presence of RF fields from licensed two way industrial radio communication devices is discussed.

[2] Quoting from the petition: "16. Users of two-way radios at all of the ports of entry around the country are placed in danger on a daily basis due to the lack of available spectrum. The entire process of unloading 5,000-ton [sic] cargo boxes from 80-foot tall vessels onto holding docks, and again onto trains or trucks for distribution is coordinated through the use of two-way radios. In the Los Angeles port authority alone, tour [sic] to five cargo ships are typically loading and unloading cargo at the same time with each terminal requiring as many as 16 different frequencies for crane operators, top handlers, side handlers, yard handlers, and superintendents use to ensure the safe transfer of cargo. Currently, port authorities use shared UHF frequencies for these critical operations, which are often obstructed due to the increased congestion on these channels. This congestion can, and does, bring life-threatening consequences when operators hear "Drop it!" from other nearby users and mistakenly believe the command was intended for them. Two deaths in the Los Angeles port in the past 90 days were the results of this type of mix-communication [sic] from a shared channel. Given sufficient spectrum, these disasters could be avoided, as frequency advisory committees could ensure that no two stevedore operations were licensed on the same channels."

The accidents cited in the LMCC petition may have been the result of a serious misunderstanding of accepted and lawful safe practices for crane operations including placement of **5,000-ton** (direct quote) loads onto highway trucks and rail cars. Direct low frequency radio control of industrial cranes has been routinely accomplished from the point of human use without dangerous radio equipment malfunction for several decades. Large metal stamping facilities may have 20 or more radio controlled cranes with lifting capacities over 70 short tons.

The use of low power low frequency encoded signals permits operation of many cranes on only a few frequencies. The short range together with encoding of the signal permits more than one crane to use the same frequency.

In cases where a human operator is in direct control of a crane in the cab or control station, it is a safe practice to use only standardized hand signals. These standardized hand signals have been developed by The American Society of Mechanical Engineers (ASME) and adopted by standards organizations.

Following Federal Occupational Safety and Health Administration (OSHA) regulations perhaps should take precedence over the LMCC understanding and assertion before The Commission as to how best achieve safe crane movement by having additional frequencies over which to issue the voice command: **"Drop it!"** [3]

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[3] From OSHA: Part 1918 Subpart G - Cargo Handling Gear and equipment Other than Ship's Gear

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OSHA Standards - 29 CFR.
(a)(7)

* Operator's station. The cab, controls and mechanism of the equipment shall be so arranged that the operator has a clear view of the load or signalman, when one is used. Cab glass, when used, shall be safety plate glass or equivalent. Cranes with missing, broken, cracked, scratched, or dirty glass (or equivalent), that impairs operator vision shall not be used. Clothing, tools, and equipment shall be stored so as not to interfere with access, operation, and the operator's view.

Conclusion

The LMCC petition clearly wants the majority of the amateur 420 to 450 MHz band and other frequencies now for two reasons that seem apparent from their petition.

(1) It is an attempt contrary to the sense of Congress expressed in the 1993 Omnibus Budget Act to attempt to obtain frequency spectrum assignments by avoiding the auction process.

(2) The LMCC desired assignment of the shared military/amateur 420 to 450 MHz band is well suited to the present existing technology many of their members are using, thus avoiding better use of existing technology and further technological improvements. This includes the use of proven applications of low power type accepted wireless devices not requiring the user to be licensed to fill some of their stated needs.

The very reasons that the LMCC has put forward for wanting primary use of the shared 420 to 450 MHz band is the best argument for retaining the present military/amateur band sharing. Namely, the ARS has a proven capability to use the extensive communications infrastructure put in place by volunteer effort to continue to provide emergency communications.

Respectfully submitted,

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